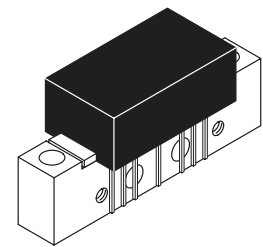


The RF Line 77-Channel (550 MHz) CATV Line Extender Amplifier

MHW6272

- Specified for 60– and 77–Channel Performance
- Broadband Power Gain — @ f = 40–550 MHz
 $G_p = 27$ dB (Typ)
- Broadband Noise Figure
 NF = 6 dB (Typ) @ 550 MHz
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors

**27 dB GAIN
550 MHz
77-CHANNEL
CATV AMPLIFIER**



CASE 714Y-03, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{in}	+55	dBmV
DC Supply Voltage	V_{CC}	+28	Vdc
Operating Case Temperature Range	T_C	-20 to +100	°C
Storage Temperature Range	T_{stg}	-40 to +100	°C

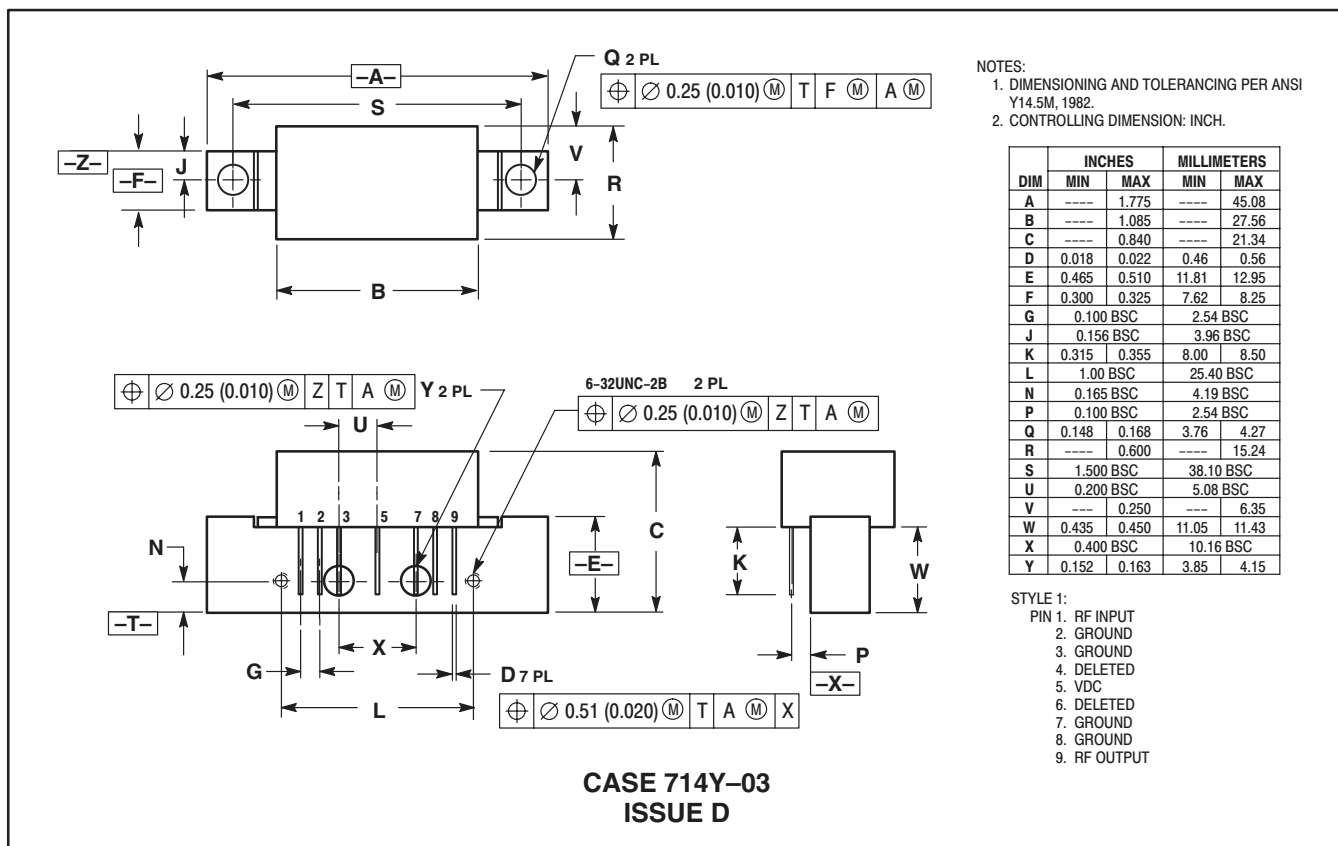
ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = +30$ °C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit	
Frequency Range	BW	40	—	550	MHz	
Power Gain	G_p	50 MHz 26.2	27	27.8	dB	
		550 MHz 27	—	29.2		
Slope	S	0	1	2	dB	
Gain Flatness (Peak To Valley)	—	—	0.4	0.8	dB	
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	IRL/ORL	40–450 MHz 18	—	—	dB	
		450–550 MHz 16	—	—		
Second Order Intermodulation Distortion ($V_{out} = +48$ dBmV per ch., Ch 2, 13, R) ($V_{out} = +46$ dBmV per ch., Ch 2, M6, M15) ($V_{out} = +46$ dBmV per ch., Ch 2, M13, M22) ($V_{out} = +44$ dBmV per ch., Ch 2, M30, M39)	IMD	—	-80 -78 -76 -69	— — — -64	dB	
Cross Modulation Distortion @ Ch 2 ($V_{out} = +46$ dBmV per ch.)	XMD ₅₃ XMD ₆₀ XMD ₇₀ XMD ₇₇	53-Channel FLAT —	-63	—	dB	
($V_{out} = +44$ dBmV per ch.)		60-Channel FLAT —	-62	—		
		70-Channel FLAT —	-61	—		
		77-Channel FLAT —	-59	-57		
Composite Triple Beat ($V_{out} = +46$ dBmV per ch.)	TB ₅₃ TB ₆₀ TB ₇₀ TB ₇₇	53-Channel FLAT —	-63	—	dB	
($V_{out} = +44$ dBmV per ch.)		60-Channel FLAT —	-62	—		
		70-Channel FLAT —	-61	—		
		77-Channel FLAT —	-59	-57		
Noise Figure	NF	550 MHz	—	6.0	6.5	dB
DC Current	I_{DC}	—	—	310	340	mA

ARCHIVE INFORMATION

ARCHIVE INFORMATION

PACKAGE DIMENSIONS



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How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
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JAPAN: Nippon Motorola Ltd.: SPD, Strategic Planning Office, 141,
 4-32-1 Nishi-Gotanda, Shagawa-ku, Tokyo, Japan. 03-5487-8488

Customer Focus Center: 1-800-521-6274

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ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
 51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

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